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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/997,774	11/30/2001	Tathagato Mukhopadhyay	7416/78598-PPA 6	5069
24628	7590	06/29/2005	EXAMINER	
WELSH & KATZ, LTD 120 S RIVERSIDE PLAZA 22ND FLOOR CHICAGO, IL 60606			TRAN, THIEN D	
			ART UNIT	PAPER NUMBER
			2665	

DATE MAILED: 06/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/997,774	Applicant(s) MUKHOPADHYAY ET AL.	
	Examiner Thien D. Tran	Art Unit 2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11/30/2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-26 and 28-41 is/are rejected.
- 7) ☒ Claim(s) 5 and 27 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3, 6-19, 21-25, 28-41 are rejected under 35 U.S.C. 102(e) as being participated by Tidemann, Jr, et a (U.S Patent No. 6,108,372).

3. Regarding claims 1, 23, 40, Tidemann discloses a method of decoding a sequence of frames in a communication system having a predetermined decoding time constraint per frame, col.4 lines 25-30, such method comprising: decoding a first frame of the sequence of frames at different rates, col.8 lines 43-67 (time period longer than the predetermined time constraint; and decoding at least one other frame of the sequence of frames by less than the predetermined time constraint so that an average decoding time of all decoded frames is less than or equal to the predetermined time constraint).

4. Regarding claims 28, 32, 41, Tidemann discloses an apparatus for decoding a sequence of frames in a communication system having a predetermined decoding time constraint per frame, col.4 lines 25-30, such apparatus comprising: a means for decoding a first frame of the sequence of frames at different rates, col.8 lines 43-67 (time period longer than the predetermined decoding time constraint; a means for

decoding at least one other frame of the sequence of frames in less than or equal to the predetermined decoding time constraint); and

a means for storing the at least one other frame while the first frame is decoded at variable rates, col.5 lines 51-66 (for longer than the predetermined decoding time constraint, and wherein the average decoding time of all decoded frames is less than or equal to the predetermined decoding time constraint), col.5 lines 51-66.

Regarding claim 2, Tidemann discloses storing at least one frame of the sequence of frames, col.5 lines 55-59.

Regarding claim 3, Tidemann discloses that at least one stored frame is stored in an input storage device, col.5 lines 55-59.

Regarding claims 6, 29 Tidemann discloses checking the frames of the sequence for errors, col.6 lines 40-50.

Regarding claims 7-11, 30, 31, Tidemann discloses the process for decoding data frames again, when there are errors (recheck and resequence), col.6 lines 40-65.

Regarding claims 12, 13, Tidemann discloses selectively storing the frames in an output storage device based on the error recheck, figure 6, lines 55-65.

Regarding claims 14-16, Tidemann discloses that the frames are decoded by a processor having a decoding rate (speed), and the frames are checked for errors after a preselected decoding time, the decoding time based on the decoding speed, figure 4.

Regarding claim 17, 33, Tidemann discloses that a Cyclic Redundancy Check is used to check for errors, col.4 lines 55-60.

Regarding claim 18, Tidemann discloses that storing at least one frame of the sequence of frames in a buffer 33 (input storage device), figure 2.

Regarding claim 19, Tidemann discloses that terminating the decoding of frames based on the error check, col.4 lines 55-60.

Regarding claim 21, Tidemann discloses a soft output Viterbi method is used to decode, col.6 line 5.

Regarding claim 22, Tidemann discloses storing at least one decoded frame in an output storage device of buffer 33, col.5 lines 58.

Regarding claim 24, Tidemann discloses the step of storing the decoded frames, col.5 lines 55-59.

Regarding claim 25, Tidemann discloses that the decoded frames are stored in an output storage device, col.5 lines 58.

Regarding claim 34, Tidemann discloses that the decoder and error check are a processor, col.6 lines 40-65.

Regarding claim 35, Tidemann discloses an alternate storage device configured to store frames having detected errors, the alternate storage device coupled to the decoder, figure 6, lines 55-65.

Regarding claim 36, Tidemann discloses a sequencer for resequencing frames, figure 7.

Regarding claim 37, Tidemann discloses that the sequencer and the decoder are a processor, col.8 lines 5-15.

Regarding claim 38, Tidemann discloses an output storage device configured to store decoded frames, the output storage device coupled to the decoder, figure 2.

Regarding claim 39, Tidemann discloses that the decoder is a processor, figure 2.

Allowable Subject Matter

5. Claims 5, 27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 4, 20, 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tidemann, Jr, et al (U.S Patent No. 6,108,372) in the view of Alexandre et al (U.S Patent No. 6,212,233 B1).

Regarding claims 4, 26 Tidemann discloses method of decoding a sequence of frames in a communication system, such method comprising: storing at least one frame of the sequence of frames in the input storage device, and decoding at least one frame of the sequence of frames. Tidemann does not disclose determining an input storage device

length for reducing input storage frame overflow. However, Alexandre et al discloses determining an input storage device size (length) for reducing input storage frame overflow, col.2 lines 5-40. Therefore, it would have been obvious to one having ordinary skill in the art to include the feature of storage device length for reducing input storage frame overflow so that frames can be processed properly.

Regarding claims 20, Tidemann discloses limitations of the base claim. Tidemann does not disclose that a maximum a posteriori method is used to decode. Alexandre discloses that posteriori method is used to decode, col.15 lines 30-37, Therefore, it would have been obvious to one having ordinary skill in the art to have posteriori method used to decode data frame so that the decoding system can limit the errors in data frames during the decoding process.

Conclusion

8. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Thien Tran whose telephone number is (571) 272-3156. The examiner can normally be reached on Monday-Friday from 8:30AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu, can be reached on (571) 272-3155. Any inquiry of a general nature of relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-2600.

9. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

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published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

you have any questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197.

Patent Examiner

Thien Tran



STEVEN NGUYEN
PRIMARY EXAMINER